

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION (R), DECEMBER 2023**CIVIL ENGINEERING****(2020 SCHEME)****Course Code : 20CET451****Course Name: Construction Planning and Management****Max. Marks : 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Outline the roles and responsibilities of any three members of a construction team.
2. Explain the functional organisation structure for a construction project.
3. Define BIM.
4. Explain the Payment of Wages Act.
5. Compare Under and Overmanning in human resource management.
6. Discuss the importance of safety inspection at the site.
7. Define: a) Earnest money deposit (EMD) b) Security deposit (SD)
8. Define the concept of the time value of money.
9. Summarise the types of budgets.
10. Describe the important financial statements in accounting.

PART B***(Answer one full question from each module, each question carries 14 marks)*****MODULE I**

11. a) Describe crashing the network and its significance. Explain various steps involved in crashing a network. (7)
- b) Differentiate resource smoothing and resource levelling. (7)

OR

12. A project has activities with the following normal and crash times and costs as given in the following table. Determine a crashing scheme for the above project to reduce the total project time by three weeks. (14)

ACTIVITY	PREDECESSOR	NORMAL TIME (WEEKS)	CRASH TIME (WEEKS)	NORMAL COST (Rs.)	CRASH COST (Rs.)
A	-	4	3	8,000	9,000
B	A	5	3	16,000	20,000
C	A	4	3	12,000	13,000
D	B	6	5	34,000	35,000
E	C	6	4	42,000	44,000
F	D	5	4	16,000	16,500
G	E	7	4	66,000	72,000
H	G	4	3	2,000	5,000

MODULE II

13. a) Explain the benefits of adopting BIM in the construction industry. (7)
 b) Discuss any two labour legislations pertaining to the construction industry. (7)

OR

14. a) Define clash detection in BIM. Explain its significance. (7)
 b) Describe the utilization of the labour welfare fund as per the Kerala Labour Welfare Fund Act 1975. (7)

MODULE III

15. Describe the method of ABC analysis for inventory control. (14)

OR

16. a) Discuss the suitable levels of training for construction workers. (7)
 b) Explain the elements of quality control for a construction project. (7)

MODULE IV

17. a) Discuss the NPV method of economic analysis of construction projects. (7)
 b) Describe the contents of a tender package. (7)

OR

18. Discuss any three methods of economic analysis of a project. (14)

MODULE V

19. a) Distinguish aggressive and conservative policies of working capital management. (7)
 b) Differentiate balance sheet and cash flow statement. How do they complement each other? (7)

OR

20. a) Discuss the finance mechanisms for infrastructure projects in the country. (7)
 b) Explain the significance of liquidity ratios in finance management. (7)
